



0061541

Department of Energy  
Richland Operations Office  
P.O. Box 550  
Richland, Washington 99352

DEC 11 2003

04-AMCP-0122

Mr. A. W. Conklin, Supervisor  
Air Emissions and Defense Waste Section  
Washington State Department of Health  
P.O. Box 47827  
Olympia, Washington 98504-7827

RECEIVED  
APR 05 2004

EDMC


Dear Mr. Conklin:

TRANSMITTAL OF DOCUMENTATION REQUIRED BY THE NOTICE OF  
CONSTRUCTION (NOC) FOR TRANSURANIC WASTE RETRIEVAL PROJECT,  
REVISION 2A

This letter transmits the documentation required in NOC ID 582 to the State of Washington, Department of Health. The documentation is required by the conditions and limitations agreed to by the U.S. Department of Energy, Richland Operations Office (RL) pertaining to the NOC application DOE/RL-2001-57, Revision 2A, "Radioactive Air Emission Notice of Construction for the Transuranic Waste Retrieval Project, 200 West Area, Hanford Site, Richland, Washington." The documents provided in the enclosures are those required to be transmitted prior to beginning operations. Other documents also requested by NOC ID 582 approval will be transmitted under separate cover.

If you have any questions you may contact me, or your staff may contact Mary Jarvis, of the Regulatory Compliance and Analysis Division, on (509) 376-2256 or Gregg I. Nishimoto, of the Safety, Health, and Quality Assurance Division, on (509) 376-3831.

Sincerely,

*for*   
Joel B. Hebdon, Director  
Regulatory Compliance and Analysis Division

AMCP:GIN

## Enclosures:

1. SWOC Container Mgt Program
2. SWSD Procedures
3. Abnormal Waste Mgt Program Procedures

cc w/encls: See Page 2

Mr. A. W. Conklin  
04-AMCP-0122

-2-

DEC 11 2003

cc w/encls:

R. H. Engelmann, FHI  
E. W. Fordham, WDOH  
R. Gay, CTUIR  
W. E. Green, FHI  
R. D. Greenwell, FHI  
R. H. Gurske, FHI  
J. E. Hyatt, FHI  
R. Jim, YN  
R. E. Johnson, FHI  
J. Schmidt, WDOH  
F. M. Simmons, FHI  
P. Sobotta, NPT  
O. S. Wang, Ecology  
D. A. Isom, Administrative Record  
Environmental Portal, LMSI

Table of Contents

|     |  |    |
|-----|--|----|
| 1.0 | PURPOSE .....  | 2  |
| 2.0 | REQUIREMENTS .....   | 3  |
| 3.0 | RESPONSIBILITIES .....   | 4  |
| 4.0 | PROCEDURE .....  | 5  |
| 4.1 | Identification of Container Conformance Issues .....                                 | 5  |
| 4.2 | Abnormal Container Management Program .....  | 6  |
| 4.3 | Waste Acceptance .....   | 10 |
| 4.4 | Container Handling and Storage .....   | 11 |
| 4.5 | Venting of Waste Containers .....  | 13 |
| 5.0 | RECORDS .....  | 14 |
| 6.0 | BIBLIOGRAPHY .....   | 14 |
|     | Attachment 1 - ACMP Process Flow Diagram .....                                       | 15 |
|     | Attachment 2 - Criteria for Entry in the Abnormal Container Management Program ..... | 18 |
|     | Attachment 3 - Example ACMP Form .....   | 19 |

## 1.0 PURPOSE

This procedure defines the Container Management Program at the Solid Waste Operations Complex (SWOC), including providing requirements, controls, and methods associated with container management. This procedure defines measures to prevent or minimize occurrence of waste container-related accidents at the SWOC facility. Specific elements include provisions for (1) abnormal container management, (2) waste acceptance process (3) and handling or storing radioactive waste. The knowledge of waste container "strength" is established and maintained within the SWOC through routine and special inspections for container integrity due to corrosion, bulging, and other physical damage. This procedure is applicable in all safety basis modes where waste containers are present.

This procedure is applicable only to Low-Level Burial Grounds (LLBG) activities. The Procedure will be revised as necessary to apply needed controls for the remainder of the SWOC facilities.

This procedure implements portions of HNF-15871, *Technical Safety Requirement for the Low-Level Burial Grounds*, Administrative Controls 5.6.1, *Venting Waste Containers* and 5.6.12, *Container Management*.

### 1.1 Background

The Container Management Program consists of three elements: 1) Abnormal Container Management; 2) Waste Acceptance; and 3) Handling and Storage.

Abnormal Container Management: Abnormal container management provides increased attention to containers that may present an elevated risk. Containers meeting criteria for entry into the Abnormal Container Management Program (ACMP) will be evaluated for actions needed to ensure container integrity, and mitigative actions will be taken based on the evaluation results. Containers in this program will be tracked to ensure timely actions are taken (including implementing storage, inspection, and labeling requirements).

Waste Acceptance:

The waste acceptance process defines measures used to control, monitor, and manage receipt and acceptance of wastes into SWOC facilities. The program comprises, approvals of waste stream and waste containers prior to receipt, procedures for verification, and a process to resolve conformance issues. Containers that meet the requirements of the waste acceptance program can be accepted into SWOC facilities.

Handling and Storage: Handling and storage encompasses those activities that assure containers continue to meet criteria for safe storage and shipment/transfer of waste. These activities include storage (stacking and spacing limitations), inspection and evaluation of damage, and implementation of the ACMP for containers that may present increased risk.

Shipping/transfer is a subset of handling and storage which ensures that when containers are shipped they meet the appropriate requirements designed to prevent or minimize release of contents during shipping activities.

Container venting is a subset of handling and storage and requires venting of waste containers to prevent accumulation of flammable gases and relieve pressure within containers. Containers that are bulged from gas generation will be managed under the ACMP.

The following acronyms are used to call out HNF-15871, *Technical Safety Requirements for the Low Level Burial Grounds*, Revision 0, notations ; HSRW-Handling or Storage of Radioactive Waste; ACMP - Abnormal Container Management Program; and WAP - Waste Acceptance Program. These acronyms are used to differentiate the three elements of TSR 5.6.12 that are implemented by this procedure. The TSR reference is provided with the procedure requirement.

## 2.0 REQUIREMENTS

- 2.1 Section 4.0 identifies Technical Safety Requirements applicable to container management and venting of waste containers.

### 3.0 RESPONSIBILITIES

3.1 Facility and Operations Managers shall ensure personnel receiving, retrieving, inspecting, handling, and storing waste containers are trained and aware of the requirements in this procedure. Specifically:

- Identify containers with potential conformance issues.
- Assign evaluators to review conformance issues.
- Ensure that all assigned Evaluators are trained to the safety basis and the requirements of this procedure.
- Evaluate potential conformance issues for entry into the ACMP and develop appropriate actions plans to mitigate ACMP containers.
- Approve the action plan for each ACMP container.
- Segregate, inspect and track ACMP containers until the mitigative activities in the action plan are complete.
- Complete mitigative action.
- Confirm completion of all mitigative actions.

3.2 Waste Services Director and Managers shall ensure personnel performing documentation review for waste acceptance and shipping activities are trained and aware of the requirements of this procedure. Specifically:

- Identify containers with potential conformance issues.
- Update SWITS and records per this procedure.
- Assign evaluators to review conformance issues.
- Ensure that all assigned Evaluators are trained to the safety basis and the requirements of this procedure.
- Assist with technical evaluations as requested.
- Provide oversight and overall coordination of the SWOC ACMP program.

3.3 Personnel involved in container management activities shall notify Operations Management of conditions that could be potential conformance issues requiring management under the ACMP.

3.4 Personnel identified as Evaluators shall perform evaluations in a timely manner and notify Operations Management of the results.

#### 4.0 PROCEDURE

Attachment 1 provides a flowchart of the activities described in Section 4.1 and 4.2 of this procedure.

#### 4.1 Identification of Container Conformance Issues

##### Operations

- 4.1.1 Container conformance issues are identified and evaluated against the ACMP criteria provided in Attachment 2 to determine if the container is required to be managed under the ACMP. [TSR 5.6.12 -HSRW-c, d, e] & [TSR 5.6.12-WAP-a]

*Note: Conformance issues are identified by a variety of methods, including, but not limited to, the following:*

- *Retrieval inspections*
- *Periodic inspections*
- *Verification and/or receipt inspections.*

- 4.1.2 If container conformance issues are noted that either meet or have the potential to meet ACMP criteria in Attachment 2, perform the following:
- a. Follow facility procedures for placing the container/area in a safe condition. [TSR 5.6.12 -ACMP-a-(1)]
  - b. Notify responsible Operations Management of the conformance issue.
  - c. Complete the Conformance Issue Identification Section of the ACMP Form (Attachment 3) and include a thorough description of the issue.
  - d. Provide ACMP form to Operations Management for evaluation and actions as described in Step 4.1.3.

#### 4.1.3 Evaluate container in a timely manner by performing the following:

##### Evaluator

- a. Perform a technical evaluation and determine if the container meets the ACMP criteria (Attachment 2) and requires entry into the ACMP. Obtain speciality expertise as needed. Document evaluation results in the Evaluation Section of the ACMP form.
- b. Provide feedback to Operations Management on the results of the evaluation.
- c. If the results of the evaluation are that the container requires entry into the ACMP, check "yes" on the Evaluation Section of the ACMP Form, sign/date the form, and go to Section 4.2.
- d. If the results of the evaluation are that the container does not require entry into the ACMP (i.e., the criteria of Attachment 2 are not met), check "no" on the Evaluation Section of the ACMP Form, sign/date the form, provide form to Waste Services, and go to step 4.2.9.

##### Waste Services

- e. Document evaluation results in Solid Waste Information Tracking System (SWITS) using the U307 screen and go to Step 4.2.9.

*Note: Evaluated containers must be inspected on a periodic basis to ensure the container does not further deteriorate or degrade. Once a container has been evaluated and appropriate actions taken, the container will continue to be inspected, and based on the inspection results, must be re-evaluated when the conditions are believed to change. For example, containers that are permanently bulged but have been proven to not be pressurized may not require further evaluation or surveillance beyond that performed during routine operations.*

#### 4.2 Abnormal Container Management Program

##### Operations

- 4.2.1 If a container is determined to require entry into the ACMP, perform the following actions: [TSR 5.6.12- HSRW- c]
  - a. Make additional notifications as necessary per facility procedures.
  - b. Complete ACMP Entry Section of ACMP form.
  - c. Provide a copy of the form to Waste Services for tracking.



Waste Services

- d. Enter evaluation results ACMP entry date and reason for entry (ACMP code) into SWITS within two working days.

Operations

- e. Each container entered into the ACMP will be placed in a safe configuration such that the area of concern will not be disturbed or impacted. Storage, inspection, and ACMP identification requirements will be determined for each ACMP container. [TSR 5.6.12- ACMP-a-(1)]
- f. See Step 4.4.4 for additional storage limitations if the container is combustible and contains TRU or suspect TRU waste.
- g. Each ACMP container will be clearly identified by a sign/or similar means using at least one of the following methods:
- Placing identification on the container in a visible location (e.g., near the bar code).
  - Segregating the container by a physical boundary (ropes, tape, walls, etc.) and placing identification such that personnel entering the area will be aware the container(s) is in the ACMP.
  - Marking the container with specific handling limitations.

Example: "Container in ACMP - No moving or handling without Operations Manager permission."

- h. The inspection frequency for monitoring the status of each container in the ACMP shall be established. The inspection frequency will be based on the identified condition and the potential for further degradation.
- i. Perform and document inspections based on the established frequency.

Waste Services

- 4.2.2 If container is newly generated, requires a facility transfer to complete mitigation activity, or otherwise requires Waste Services support, perform the following:
- a. For facility transfers, prepare scope and Container Activity Sheet per WMP-370, Section 1.8, "Treatment, Storage, and Disposal Transfer and Documentation Process for Waste Containers."
  - b. Provide support in developing and tracking the action plan.
  - c. Provide support in technical evaluations, ACMP tracking, and SWITS entry.

Operations

- 4.2.3 If the conformance issue is a potential deficiency and will be issued to Corrective Action Management, initiate the Corrective Action Management Process in accordance with HNF-PRO-052.
- 4.2.4 Develop an action plan to mitigate the issue that placed the container in ACMP. Document the action plan on the ACMP Action Plan Section of the ACMP form. The action plan will be approved by the facility manager or designee. [TSR 5.6.12-ACMP-a-(2)] The action plan should normally include:
- If the mitigative actions are to be performed at a facility other than LLBG, the requirements of the action plan SHALL be provided to, and approved by, the receiving facility.
  - Explanation of actions needed to mitigate the conformance issue.
  - Reiterate or change inspection frequency previously established.
  - Completion criteria/expectations.

*Note 1: A work package or procedure may serve as the action plan if the required actions are included in the scope of that document.*

*Note 2: Action plans will be tracked and maintained by facility Operations Management.*

4.2.5 Complete mitigative actions as defined in the action plan. Special consideration should be given to meet the following time requirements:

- a. If the container is bulged, ensure it is vented within 14 calendar days. [TSR 5.6.12-HSRW-g]
- b. If the container is TRU or suspect TRU and reason for being in the ACMP is physical damage or corrosion, ensure it is overpacked or otherwise mitigated within 30 calendar days. [TSR 5.6.12-HSRW-f]

4.2.6 Sign the ACMP Action Plan Completion Section of the ACMP form and provide reference to, or copies of, supporting documentation as applicable. The signature confirms that all required mitigative actions (from the action plan) have been completed.

4.2.7 Remove ACMP identification, storage controls, and inspection controls from the container as appropriate. [TSR 5.6.12-ACMP-a-(3)]

4.2.8 Deliver the ACMP records (ACMP Form and supporting documentation) and forms to the Waste Services ACMP Coordinator.

#### Waste Services

4.2.9 Complete ACMP closeout by performing the following:

- a. Prepare addendum per WMP-370, Section 1.8 if required, including any SWITS changes as necessary.
- b. Complete Closeout Section of the ACMP Form and enter in SWITS.
- c. Transmit ACMP records to the Waste Services Records Library for management as a permanent record.

*Note: Containers are considered to have exited the ACMP when the mitigation (Step 4.2.6) is complete and SWITS has been updated (Step 4.2.9). Time requirements listed in Section 4.2.5 are considered to be met once the mitigation action is complete.*

### 4.3 Waste Acceptance

- 4.3.1 Waste containers that are not compliant with HNF-EP-0063 shall not be "TSD Accepted" at any SWOC facility. [TSR 5.6.12-HSRW-c-(1)]
- 4.3.2 Compliance with HNF-EP-0063 is established by use of procedure WMP-200, Section 6.1, "Waste Acceptance Program." This procedure provides for the following:
- a. A pre-shipment review of documentation provided by waste generators (for waste stream and waste shipment information) is performed by Waste Services before authorization to ship is given. This pre-shipment review covers both the container contents and the suitability of container for those contents. This pre-shipment review is described in WMP-370, Sections 1.6, 1.7, and 1.8.
  - b. Containers are inspected upon arrival at a facility to confirm they match the data approved during the pre-shipment review. Receipt inspections are described in facility-specific operating procedures.
  - c. A percentage of waste to be received from generators is verified by physical and/or chemical screening methods to confirm the information provided by the generator during the pre-shipment review. Verification is described in WMP-370, Section 1.10.
- 4.3.3 Waste containers arriving at the SWOC that are not compliant with HNF-EP-0063 shall be evaluated using Attachment 2, criteria to determine if the containers are required to be managed under the ACMP. [TSR 5.6.12-HSRW-c-(2)]

*Note: Conformance issues in minor areas, such as discrepancies in labeling are not reasons for entry into the ACMP. These types of issues are managed and controlled within the waste receipt, verification and performance evaluation systems implemented at the SWOC Facilities.*

- 4.3.4 Waste Services personnel identifying potential conformance issues meeting Attachment 2 criteria shall notify Operations Management in accordance with Section 4.1.2.
- 4.3.5 Operating procedures shall require waste container receipt inspections to identify conformance issues. Operations Management shall evaluate conformance issues in accordance with Section 4.1. [TSR 5.6.12-HSRW-c,d,e]

#### 4.4 Container Handling and Storage

4.4.1 DOE/RL-2001-36, *Hanford Site Transportation Safety Document (TSD)*, shall be complied with for controls on shipment of waste. [TSR 5.6.12-HSRW-b]

4.4.2 Compliance with DOE/RL-2001-36 is implemented through the following:

Fluor Hanford Procedures:

- HNF-PRO-156, *Onsite Hazardous Material Shipments*
- HNF-PRO-157, *Offsite Hazardous Materials Shipments*
- HNF-PRO-15665, *Package-Specific Safety Documents*
- HNF-RD-7900, *Transportation and Packaging Program Requirements*

Waste Management Project Procedures:

- WMP-370, Section 1.9, "Offsite Shipment of Hazardous Materials"
- WMP-370, Section 1.17, "Onsite Shipping of Hazardous Materials"
- WMP-370, Section 2.30, "Transportation & Packaging Requirements for the Transfer of Waste Materials Between Facilities"
- WMP-370, Section 2.31, "Shipment of "NON-DOT" Hazardous Material Containers Requiring Road Closure"
- WMP-370, Section 2.32, "Transportation Activities at the 1163 Building"

*Note: Drum stacking limitations do not apply to the following :*

- *Drums for LLW disposal awaiting backfill at LLBG.*
- *Retrievably stored TRU or suspect TRU drums at LLBG.*
- *Drums in stacker/retriever at WRAP.*

4.4.3 Facilities shall have operating procedures that control stacking of waste containers and implement the following stacking limitations:  
[TSR 5.6.12-HSRW-a]

- Radioactive waste in drums shall not be stored/staged more than 2 tiers high outside.
- Inside stacks may be up to 3 high provided the third tier is banded.

- 4.4.4 If container is constructed of combustible material (i.e., wooden box or fiberglass reinforced plywood box) and found during TRU retrieval activities, ensure the following are satisfied.
- Containers are staged in Facility Zones not to exceed 600 DE-Ci. [TSR 5.6.12-ACMP-b-(1)]
  - Containers are separated from other Facility Zones by at least 10 meters (33 feet). [TSR 5.6.12-ACMP-b-(2)]
  - Remove from the trench any fossil fueled equipment not needed for the excavation or relocation of the combustible container. [TSR 5.6.12-ACMP-b-(3)]
  - If fossil fueled heavy lift equipment (e.g., fuel volume >400 gallons) must be used for such relocation, physical barriers (i.e., trenches, sandbag berms, ditches, etc.) SHALL be placed between the container and such equipment to preclude the introduction of flammable liquids within 5-feet (1.5 meters) of TRU waste drums and within 33 feet (10-meters) for combustible waste containers in the event of a heavy equipment fuel tank rupture or leak. [TSR 5.6.12-ACMP-b-(4)]
- 4.4.5 Facilities that store or retrieve waste containers shall develop and implement operating procedures that require periodic inspections to determine if the waste containers have degraded. Inspections shall be conducted in accordance with the criteria of Attachment 2. Operations Management shall evaluate conformance issues identified during retrieval or periodic inspections in accordance with Section 4.1. [TSR 5.6.12-HSRW-e,f]

#### 4.5 Venting of Waste Containers

- 4.5.1 Un-vented TRU, suspect TRU, or other waste containers requiring venting shall be accumulated in batches. [TSR 5.6.12-HSRW-i (1)]

*Note: Based on SWITS data, drums that are suspected to be LLW (less than or equal to 1 gram) may be assayed to determine what future action is required. If determined to be TRU, the unvented drum shall be entered into a 50 drum batch.*

- 4.5.2 Containers requiring venting shall be physically segregated (and movement minimized) into different Facility Zones as discussed in Step 4.4.4 above from containers that do not require venting. [TSR 5.6.12-HSRW-j]

- 4.5.3 Back-logged un-vented TRU or suspect TRU containers in the LLBG shall be vented within 120 calendar days of drum venting system being declared operational. [TSR 5.6.12-HSRW-i (5)]

*Note: A batch of < 50 TRU or suspect TRU unvented containers may be processed per Step 4.5.4 per management direction.*

- 4.5.4 During TRU Retrieval operations up to 50 un-vented TRU, suspect TRU, or other waste containers may be accumulated in a batch. The total number of unvented containers at the TRU Retrieval Project not on a 90-day clock shall not exceed 50 containers. [TSR 5.6.12-HSRW-i (4)] When 50 un-vented containers are accumulated perform the following:

- Identify the group of drums as a batch, start 90-day clock, and record in facility log. [TSR 5.6.12-HSRW-i (2)]
- Ensure all containers in batch are vented within 90 days of starting the 90-day clock. [TSR-5.6.12-HSRW-i (3)]

- 4.5.5 Operating procedures shall be prepared describing operation of the drum venting system (DVS), including the following:

- Identification of DVS to be used. [TSR 5.6.1-b]
- Requirements to have drum lid restraints or other deflagration confinement in place. [TSR 5.6.1-c]
- Provisions to ensure drum movement following venting is not allowed (other than to a staging area) until the appropriate processing and holding times have been met per approved procedures. Required holding times are documented in HNF-16166. [TSR 5.6.1-a]

4.5.6 A quarterly surveillance shall be performed and documented at TRU Retrieval that includes the following:

- Visual observation of containers requiring venting to verify they are physically segregated. [TSR 5.6.12-HSRW-j]
- Verification that accumulated batches of 50 or more containers have not exceeded the 90-day clock as defined in Step 4.5.4 above. [TSR 5.6.12-HSRW-j]

## 5.0 RECORDS

5.1 The ACMP Form and any supporting documentation are record material and must comply with the requirements of HNF-RD-210, *Records Management Program Standards* and WMP-370, Section 2.23, "Waste Services Records Management."

5.2 Surveillance and inspection records must comply with the requirements of HNF-RD-210.

## 6.0 BIBLIOGRAPHY

HNF-15871, *Technical Safety Requirements for the Low Level Burial Grounds*

DOE/RL-2001-36, *Hanford Sitewide Transportation Safety Document*

HNF-EP-0063, *Hanford Site Solid Waste Acceptance Criteria*

HNF-16166, *Required Staging Times for Hydrogen Diffusion in Vented Waste Containers*

HNF-RD-210, *Records Management Program Standards*

HNF-14741, Rev 0, matrixed sections, *Waste Management Project Master Documented Safety Analysis*

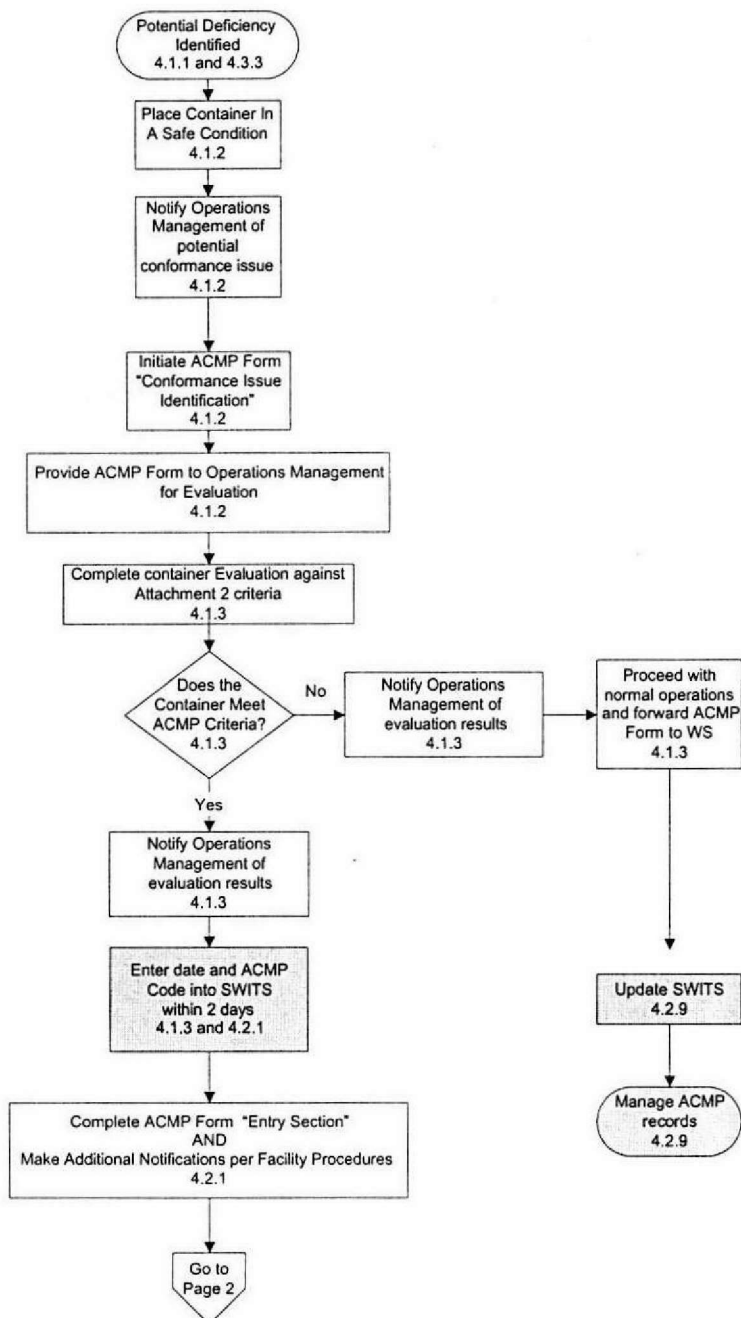
HNF-11724, *Fluor Hanford Safety Management Program*

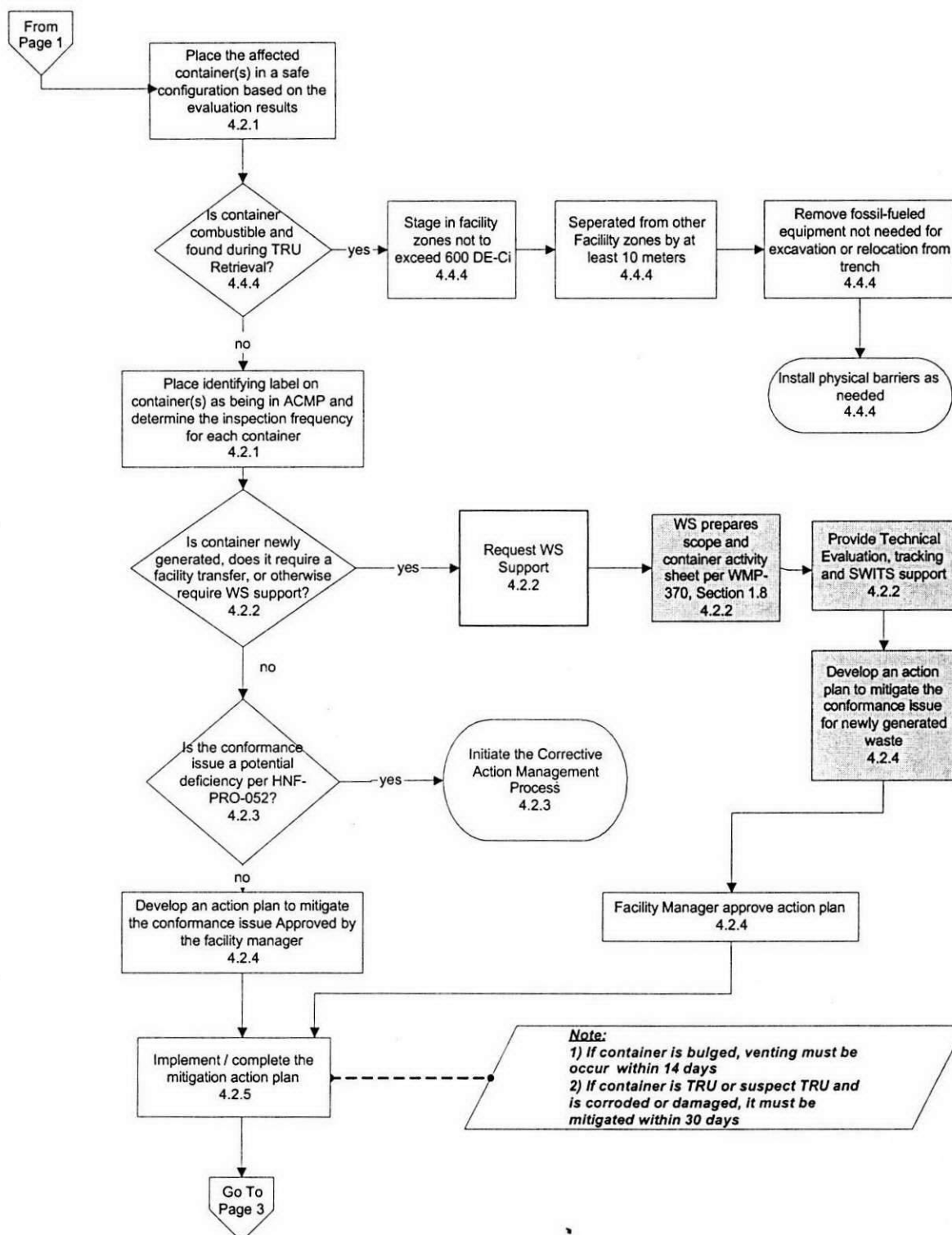
DOE RL Letter 03-ABD-0037, *Safety Evaluation Report for the Fluor Hanford Safety Management Program Document*

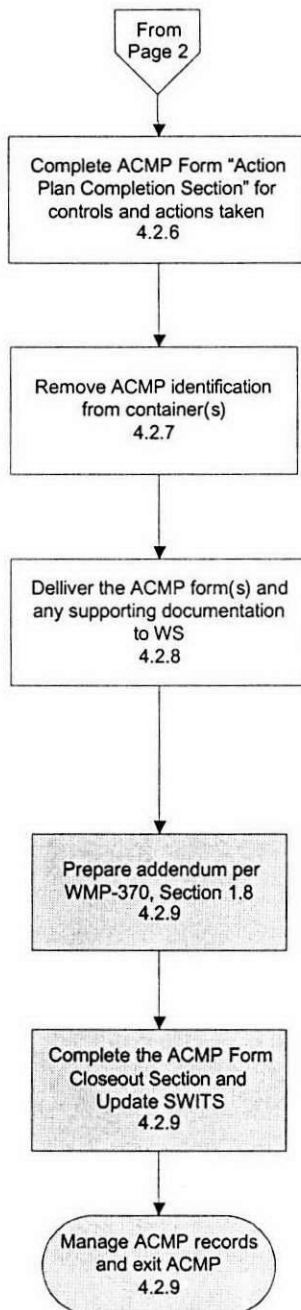
DOE RL 03-ABD-0057, *Safety Evaluation Report for Acceptance of Risk due to Protection Technology Hanford Activities.*



## Attachment 1 - ACMP Process Flow Diagram







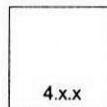
## LEGEND



White boxes are performed by Facility Operations or designee



Shaded boxes are performed by Waste Services



Numbers at the bottom of each frame indicate the procedure step number

**Attachment 2 - Criteria for Entry in the Abnormal Container Management Program**

Container meeting the following criteria shall be entered into the ACMP: [TSR 5.6.12-c,d,e,h]

| Category |  | Criteria   |
|----------|--|--|
| 1        | Indications of bulging from gas generation<br>[TSR 5.6.12-HSRW-d-e]  | Visibly bulged (convex) top, bottom or side surfaces.<br>Rocking when setting on flat surface indicative of a raised section in center region of bottom surface.   |
| 2        | Physical damage that would preclude handling, movement or disposal without likely spread of contamination.<br>[TSR 5.6.12-HSRW-d-e-h]        | Damage has, or appears to have, resulted in penetration through container wall.<br>Damage is extensive such that container integrity appears to be affected.<br>Damage has, or appears to have, potential to prevent normal safe storage (such as not being stable when stacked, etc.)   |
| 3        | Substantial corrosion that would preclude handling, movement, or disposal without likely spread of contamination.<br>[TSR 5.6.12-HSRW-d-e-h] | Corrosion has, or appears to have, resulted in penetration through container wall.<br>Corrosion is extensive such that the outer containment appears to be affected.<br>Corrosion is, or appears to be, more extensive than that which can be sanded or brushed off.<br>Corrosion appears to be originating from inside the container (e.g., blistering, possibly indicating that corrosion damage is more extensive on the inside of the container).<br>For TRU Retrieval: Corrosion meeting one of the above corrosion criteria. |
| 4        | High dose rates<br>[TSR 5.6.12-HSRW-d]   | Dose rates that do not meet the facility-specific acceptance criteria of HNF-EP-0063.<br>For TRU Retrieval: Radiation levels that exceed >100 mrem/hr at 30 cm or >200 mrem/hr at contact.   |
| 5        | Non-standard drums<br>[TSR 5.6.12-HSRW-d]  | A waste container (or waste stream) for which no storage or disposal within SWOC facilities is currently authorized.   |
| 6        | Containers with unknown contents<br>[TSR 5.6.12-HSRW-d]  | Information is obtained that causes the characterization to be questioned and a technical evaluation determines that insufficient information is available to assure proper management of the container (e.g., ignitable, corrosive, explosive, or incompatible contents).<br>For TRU retrieval:<br>No <u>visible</u> PIN/CIN, or seal number, incomplete storage/burial records, or illegible identification on drum.<br>Containers with CIN/PIN or seal number that do not have any description of contents in SWITS or records. |
| 7        | Other  | Other identified conformance issue that a technical evaluation determines has safety basis impacts.  |

### Attachment 3 - Example ACMP Form

|                                     |   |   |                          |
|-------------------------------------|---|---|--------------------------|
| 1. Conformance Issue Identification | CIN #:  | PIN #<br>(if available)   | Seal #<br>(if available) |
|                                     | Identification date:  | Identification Location: (Circle one)<br>WRAP          T Plant          LLBG          CWC |                          |
|                                     | Description of Issue<br><br>Name/Signature: _____ Date: _____<br><i>Provide form to Operations Management as soon as possible upon identification of conformance issue.</i>   |   |                          |
| 2. Evaluation                       | Description of Evaluation and Results<br><br>Entry into ACMP Required: <input type="checkbox"/> Yes - Go to Section 3, ACMP Entry<br><input type="checkbox"/> No - Forward form to WS<br><br>Evaluator Name/Signature: _____ Date: _____<br><i>Notify Operations Management of the results of the evaluation.</i>   |   |                          |
| 3. ACMP Entry                       | <u>Reason for Entry into ACMP</u><br><input type="checkbox"/> 01 a. Bulging<br><input type="checkbox"/> 02 a. Damaged<br><input type="checkbox"/> 03 a. Corrosion<br><input type="checkbox"/> 03 b. TRU or suspect TRU container corrosion<br><input type="checkbox"/> 04 a. High dose rate exceeds facility EP-0063 criteria<br><input type="checkbox"/> 04 b. High dose rate exceeds TRU retrieval criteria<br><input type="checkbox"/> 05 a. Non-standard drum<br><input type="checkbox"/> 06 a. Unknown contents - questionable characterization for safe management<br><input type="checkbox"/> 06 b. Unknown contents - does not meet the TRU retrieval criteria<br><input type="checkbox"/> 07 a. Other safety basis issue<br><br>Facility/Operations Manager or Designee Name/Signature: _____ Date: _____<br><i>Provide copy of form to Waste Services</i> |   |                          |
| 4. ACMP Action Plan                 | <u>Storage, Inspection, Labeling and Mitigation Requirements</u><br><br>Storage Limitations:<br><br>Inspection Frequency:<br><br>Special Labeling:<br><br>Mitigation Actions:<br><br>Action Plan Approved by<br>Facility Manager or Designee Name/Signature: _____ Date: _____  |   |                          |
| 5. Action Plan Completion           | Mitigation Actions Complete<br>Operations Management Name/Signature: _____ Date: _____<br><br>Reference Document(s) _____<br><i>Provide form and supporting documentation to Waste Services</i>   |   |                          |
| 6. Closeout                         | Records complete, SWITS updated<br>Waste Services Name/Signature: _____ Date: _____   |   |                          |

Attach additional continuation sheets as necessary for any section above.

## Table of Contents

|            |  |                  |
|------------|--|------------------|
| <b>1.0</b> | <b>PURPOSE</b>   | <b><u>2</u></b>  |
| <b>2.0</b> | <b>REQUIREMENTS</b>  | <b><u>2</u></b>  |
| <b>3.0</b> | <b>RESPONSIBILITIES</b>                                    | <b><u>3</u></b>  |
| <b>4.0</b> | <b>PROCEDURE</b>   | <b><u>4</u></b>  |
| <b>4.1</b> | <b>Mitigation of Abnormal Containers</b>                   | <b><u>4</u></b>  |
| 4.1.1      | <u>Bulging Drums</u>                                       | <u>4</u>         |
| 4.1.2      | <u>Physical Damage</u>                                     | <u>6</u>         |
| 4.1.3      | <u>Corrosion</u>   | <u>7</u>         |
| 4.1.4      | <u>High Dose Rate</u>                                      | <u>9</u>         |
| 4.1.5      | <u>Non-Standard Container</u>                              | <u>10</u>        |
| 4.1.6      | <u>Unknown Contents</u>                                    | <u>11</u>        |
| 4.1.7      | <u>Other Identified Conformance Issues</u>                 | <u>12</u>        |
| <b>4.2</b> | <b>Labeling, Storage Limitations &amp; Inspections</b>     | <b><u>12</u></b> |
| 4.2.1      | <u>Special Labeling</u>                                    | <u>12</u>        |
| 4.2.2      | <u>Storage Limitations</u>                                 | <u>13</u>        |
| 4.2.3      | <u>Inspection Frequency</u>                                | <u>13</u>        |
| <b>4.3</b> | <b>Tracking and Termination of 5-Day and 30-Day Clocks</b> | <b><u>14</u></b> |

## 1.0 PURPOSE

This procedure provides instruction for developing an Action Plan for containers that have been evaluated to be included in the ACMP program, by SWSD, according to procedure WMP-200, Section 4.12, *SWOC Container Management Program*. The process as outlined by this procedure provides considerations for container characterization and possible corrective actions to develop an Action Plan and is not intended to capture every possible scenario for a container in the ACMP program.

### 1.1 Scope

This procedure applies to Low Level Burial Ground (LLBG) containers that have been evaluated as an ACMP container per WMP-200, Section 4.12. The ACMP does not apply to:

- Conformance issues identified during waste receipt and acceptance unless specifically identified for management under the ACMP
- Low-level waste containers that can be disposed without likely spread of contamination.

## 2.0 REQUIREMENTS

2.1 HNF-15871, *Technical Safety Requirements (TSR) Low Level Burial Ground*

2.2 WMP-200-4.12, *SWOC Container Management Program*

2.3 SW-100-166, *Implement ACMP*

2.4 SW-ERP-010, *Response to Bulged Drum*

### 3.0 RESPONSIBILITIES

WMP-200, Section 4.12, identifies Waste Services or Operations as performing procedure steps. The following are more specific responsibilities for implementation of WMP-200, Section 4.12, by SWSD:

- Containers requiring an Action Plan have been evaluated per WMP-200, Section 4.12, by an evaluator listed on the approved list of evaluators as determined by the SWSD Facility Manager.
- The evaluator, listed on the approved list of evaluators, will approve container entry into the ACMP, sign the ACMP Entry section of the ACMP form, start the TSR clock by entering the container as an ACMP container in SWITS, and track mitigation actions for the container while being on the clock.
- Operations support will develop an Action Plan following the guidelines of this procedure and document the Action Plan in the ACMP Action Plan section of the ACMP form or attach it to the form. Facility Manager or Designee will approve the Action Plan and sign the ACMP Action Plan section of the ACMP form.
- Operations Management will verify completion of the mitigation actions of the Action Plan and sign the Action Plan Complete section of the ACMP form.
- Any attachments to the ACMP form must contain the PIN/CIN number and Identification date.



#### 4.0 PROCEDURE

*Note: As used in this procedure, the term characterization implies the determination of the characteristics of the container that will be used to develop the Action Plan.*

#### 4.1 Mitigation of Abnormal Containers

SW-100-166 provides instructions for handling containers with potential for entry into the ACMP. SW-100-166 provides for the safety of personnel, placing the container in a safe configuration, and making appropriate notifications. WMP-200, Section 4.12, provides criteria used to evaluate the container for entry into the ACMP and instructions for completing the ACMP form. The next step in the ACMP process is to develop an Action Plan to mitigate the abnormality. The Action Plan consists of Mitigation Actions, Special labeling, Storage Limitation and Inspections. Section 4.2 of this procedure covers Labeling, Storage Limitations, and Inspections. This section provides guidelines for developing the Mitigation Actions by providing information to be gathered that may impact the plan and a general outline of steps most likely needed in the Plan.

[TSRs 5.6.1 and 5.6.12]

Action Plans will be developed in accordance with Integrated Safety Management System (ISMS) principles, Nuclear Safety requirements and Safety Management Programs.

##### 4.1.1 Bulging Drums

##### Time Clock Requirement

When accessible for retrieval, a drum identified as a potential ACMP (in accordance with SW-100-166) must be evaluated within 24 hrs or as specified by facility manager. Once a drum is evaluated as requiring entry into the ACMP per WMP-200, Section 4.12, because of bulging, Section 3 of the ACMP form must be completed. A copy of the completed form must be forwarded to Waste Services. The evaluator is responsible for starting the 5-day TSR clock for venting bulged drums in SWITS by designating the container as an ACMP container and tracking the mitigation actions for the container while being on the clock. Because of the short time clock requirement for this situation, the Action Plan should be started within 24 hrs of identification or as specified by the facility manager.

[TSR 5.6.12-HSRW-g]

4.1.1 (Cont'd)Characterization

The following considerations should be used to characterize a bulging drum for development of an Action Plan:

- Determine if the drum can be moved and/or overpacked.
- Determine drum temperature. If temperature is greater than 20 °F higher than surrounding drums, this may be an indication of internal pressurization. Consider shading and increased frequency of temperature monitoring.
- Review Radcon survey results. Contamination may indicate a breach. Inspect for breach. Decontaminate.
- Determine drum contents from drum label, Container Relocation Approved List (CRAL), or SWITS. Drum may contain gas generating constituents or hazardous chemicals that need to be considered in mitigating actions.
- Determine if the drum contains liquid (detected by liquid movement, weight distribution changes, and sounds of sloshing) which may have frozen and expanded the drum so that it appears to be pressurized but may not be pressurized.
- Determine if the drum is corroded. This may affect decision to move drum.
- Determine if the drum is vented. Vent may have become plugged.
- Check condition of locking ring and retaining bolt. Tighten if loose.
- Look for vent path such as a crease in the lid, most likely located at ring bolt area. Drum may be bulged but no longer pressurized.

Potential Mitigation Actions

- Drums that cannot be moved or overpacked require emergency response.  
[TSR 5.6.1.e]
- If the drum can be moved and overpacked, overpack the drum and apply lid restraint.
- Vent the drum and overpack combination.

4.1.1 (Cont'd)Other Mitigation Considerations

- Grounding and bonding.
- Spill pallet.
- Minimize local ignition sources.
- Worker safety and environmental releases and other mitigations in the event of a deflagration.

4.1.2 Physical DamageTime Clock Requirement

Once a drum is evaluated as requiring entry into the ACMP per WMP-200, Section 4.12, because of physical damage, Section 3 of the ACMP form must be completed. A copy of the completed form must be forwarded to Waste Services. The evaluator is responsible for starting the 30-day TSR clock for mitigating physically damaged drums by entering the container as an ACMP container in SWITS and tracking the mitigation actions for the container while being on the clock.

[TSR 5.6.12-HSRW-f]

Characterization

The following considerations should be used to characterize a physically damaged container for development of an Action Plan:

- Determine if container is breached and extent of breach. Small breach may be fixed. Large breach may preclude movement.
- Determine extent of container deformation. Deformation may preclude use of mDVS and call for DART.
- Determine if there are any solids or crystals outside the container. This may be an indication of a breach.
- Determine container contents from drum label, Pick List, or SWITS. Contents may dictate additional precautions in event of breach.

#### 4.1.2 (Cont'd)

- Review survey results (IH and Radcon). Results may indicate breach. Contamination will have to be cleaned up.
- Determine if the container is vented.
- Determine the impact of releases to the environment.
- Determine the interface with adjacent containers. Can other containers be moved to address affected container
- Determine the interface with environmental restoration function.

#### Potential Mitigation Actions

- Determine if container can be moved without likely spread of contamination
- If potential spread of contamination exists, container will require bagging before overpacking and/or inverting the overpack over the container and inserting a plate under the container
- Decontaminate or fix contamination
- If container is an unvented drum, and drum deformation would preclude successful venting in the Drum Venting System after overpack, vent the drum with the DART system without the overpack
- Overpack container
- Cleanup any spread of contamination
- Vent container (if needed)

#### 4.1.3 Corrosion

##### Time Clock Requirement

Once a drum is evaluated as requiring entry into the ACMP per WMP-200, Section 4.12, because of corrosion, Section 3 of the ACMP form must be completed. A copy of the completed form must be forwarded to Waste Services. The evaluator is responsible for starting the 30-day TSR clock for mitigating corroded containers by entering the container as an ACMP container in SWITS and tracking the mitigation actions for the container while being on the clock.

[TSR 5.6.12-HSRW-f]

#### 4.1.3 (Cont'd)

##### Characterization

The following considerations should be used to characterize a corroded container for development of an Action Plan:

- Determine if container is breached and extent of breach. Used to determine if container can be moved
- Determine if there are any solids or crystals outside the container. This may be an indication of a breach.
- Determine container contents from drum label, Approved List, or SWITS. May indicate potential for internal corrosion.
- Review Radcon survey results (IH and Radcon). May be indicator of container breach.
- Determine if the container is vented.
- Determine if the source of corrosion is internal or external. Surface corrosion may be removed to help in assessing extent of corrosion.
- Determine if an ultra-sonic wall thickness analysis is necessary. This will give an indication of the structural integrity of the container.
- Check container weight. Heavier containers are more susceptible to failure.
- If shipping container is an option, shipping is allowed with only minor corrosion. Minor corrosion can be defined as a corroded area less than approximately 5% of total exterior surface of drum as determined by visual examination or using steel wool, brush, or other light abrasive on corroded area.

##### Potential Mitigation Actions

- Determine if container can be moved without likely spread of contamination
- If potential spread of contamination exists, container will require bagging before overpacking and/or inverting the overpack over the container and inserting a plate under the container.

4.1.3 (Cont'd)

- Decontaminate or fix contamination
- Overpack container
- Cleanup any spread of contamination

4.1.4 High Dose RateTime Clock Requirement

There is no time clock requirement associated with drums of high dose rates.

Characterization

The following considerations should be used to characterize a high dose rate container for development of an Action Plan:

- Determine if container is breached and extent of breach.
- Determine if container will be moved or remain in place.
- Determine if there are any solids or crystals outside the container.
- Determine container contents from drum label, Approved List, or SWITS.
- Review survey results (IH and Radcon).
- Determine if the container is vented.
- Determine if there is any shielding and the condition of the shielding. Internal or exposed lead, attached or not, location, removable. Will shielding need to be removed to move container?
- Determine if forklift or other transport system offer enough dose protection without adding shielding.
- Determine lead disposal options.
- Determine under what conditions container can be moved with minimum risk to personnel.

4.1.4 (Cont'd)

- Determine if shielding can be used to enable relocation.
- Determine if there are other high dose rate containers in the area that produce an additive effect.

Potential Mitigation Actions

- Revise RWP if necessary.
- Examine container to the extent possible based on dose. If other ACMP criteria apply, the respective sections of this procedure will apply.
- If container will remain in place, provide required shielding and posting.
- If container is Contact Handled (CH) shield per RWP and relocate to staging area.
- If container is high radiation, stage in designated area and protect and post as required until ready for future processing.
- Container may require special handling including use of remote handling equipment.

4.1.5 Non-Standard ContainerTime Clock Requirement

There is no time clock requirement associated with non-standard drums.

Characterization

The following considerations should be used to characterize a non-standard container for development of an Action Plan:

- Determine if work in the trench can continue if the container is left in place.
- Determine what surveillance and/or maintenance is needed to preserve container integrity during outdoor storage.
- Determine whether or not a disposition path exists or can be made for this container.



4.1.5 (Cont'd)Potential Mitigation Actions

- If work in the trench can continue with the non-standard container in place, leave the non-standard container in place.
- If work in the trench cannot continue with the non-standard container in place, move the non-standard container to a LLBG location that can accommodate long term surveillance requirements.
- Establish outdoor storage surveillance/maintenance requirements.
- Notify WMP Strategic Planning for entry into programmatic path forward development.

4.1.6 Unknown ContentsTime Clock Requirement

There is no time clock requirement associated with unknown contents drums.

Characterization

There may be containers that are entered into the ACMP in this category for which there is partial information available. For example a container may not have a CIN/PIN or seal number but it may have recorded on the container the fissile material content. This information should be considered in the Action Plan.

Potential Mitigation Actions

- Classify container as CPS Type 4 container, unless otherwise directed by the Criticality Safety Representative (CSR).
- Enter container in SWITS with a temporary identification using DE-Ci value of 82.5 and Fissile grams equivalent (FGE) of 287, unless otherwise directed by CSR.
- Apply temporary bar code label and fissile bar code label
- Handle container based on above designations
- Assay container if possible and relabel accordingly
- Ship to WRAP for further characterization. WRAP would need to approve the mitigation plan.



#### 4.1.7 Other Identified Conformance Issues

There may be other issues that warrant entry into the ACMP that do not fit in the above categories. The Other category has been developed to document these issues. Possibilities include:

- External crystal formation, smoke or odiferous containers.

The Other category will be used to enter drums containing a waste stream that could generate oxygen, into the ACMP. When accessible for retrieval, a drum identified as a potential ACMP (in accordance with SW-100-166) because it contains a waste stream that could generate oxygen, must be evaluated within 24 hrs or as specified by facility manager. Once a drum is evaluated as requiring entry into the ACMP per WMP-200, Section 4.12, because it contains a waste stream that could generate oxygen, Section 3 of the ACMP form must be completed. A copy of the completed form must be forwarded to Waste Services. The evaluator is responsible for starting the 5-day TSR clock for venting oxygen generating drums by entering the container as an ACMP container in SWITS and tracking the mitigation actions for the container while being on the clock. Because of the short time clock requirement for this situation, the Action Plan should be started within 24 hrs of identification or as specified by the facility manager.

[TSR 5.6.12-HSRW-g]

## 4.2 **Labeling, Storage Limitations & Inspections**

This section covers remaining elements for consideration in developing the Action Plan.

### 4.2.1 Special Labeling

Special handling instructions that may be required based on condition of container/contents, should be listed and provided to Operations for either marking on container or label, or provided with accompanying container paperwork. Handling instructions may include:

- a. Restrictions on movement of container
- b. Special handling requirements
- c. Storage limitations
- d. Criteria for further notification of Engineering

#### 4.2.2 Storage Limitations

Storage limitations may include one or more of the following:

- a. Shading from direct sunlight
- b. Temporary containment for a breached or near-breached container
- c. Isolation from other containers
- d. Space limitations
- e. Stacking requirements
- f. Shielding
- g. Separation from other containers or personnel
- h. Placement on spill pallet
- i. Increased frequency of inspection
- j. Vehicle access, refueling and fire protection controls

#### 4.2.3 Inspection Frequency

The storage period inspections will be designed to detect change while awaiting mitigation from initial drum conditions or watching for continued integrity. The periodic inspection frequency (typically weekly) should consider changes that may be occurring during the storage period such that potential further degradation of container condition can be predicted. This would allow a response to be taken before a spill or container breach could occur.

If an inspection is required, the person drafting the Action Plan shall develop an inspection checklist and provide it to Operations. The inspections shall be performed by Operations personnel. A copy of the documented inspection information will be forwarded to engineering as it is generated, for ongoing analysis of changing conditions. Continuing surveillance at a suitable level may be appropriate for certain mitigated ACMP containers, such as non-standard containers.

When practical, overpacking, portable storage modules, or transfer to indoor storage should be considered to avoid long-term outdoor storage, maintenance, and inspection needs.

#### **4.3 Tracking and Termination of 5-Day and 30-Day Clocks**

Tracking clocks will be performed by downloading reports from SWITS at a frequency depending on the time remaining on the clock and coordinating with Operations for completion of the required mitigating action.

Upon completion of the Action plan, the ACMP form shall be signed off and forwarded to Waste Services who will exit the ACMP in accordance with WMP-200, Section 4.12.

---

Solid Waste  
**Implement ACMP**  
**SW-100-166**

Rev/Change    A-1f

Page 1 of 10  
Effective Date:

Approved But Not Released - TRU Retrieval RA - December 3, 2003 (8:49am)

Approval Designator: **E, I, N, P, Q, R, T, W**

Procedure Use Level: **Continuous**

**Table of Contents**

|  |                 |
|--|-----------------|
| <b>Revision Status</b> .....                                       | <b><u>2</u></b> |
| <b>1.0    <u>Purpose and Scope</u></b> .....                       | <b><u>3</u></b> |
| <b>2.0    <u>References</u></b> .....                              | <b><u>3</u></b> |
| <b>3.0    <u>Precautions and Limitations</u></b> .....             | <b><u>3</u></b> |
| <b>4.0    <u>Special Tools, Equipment, and Materials</u></b> ..... | <b><u>4</u></b> |
| <b>5.0    <u>Prerequisites</u></b> .....                           | <b><u>4</u></b> |
| <b>6.0    <u>Instructions</u></b> .....                            | <b><u>5</u></b> |
| <b>6.1    <u>Identify Abnormal Container</u></b> .....             | <b><u>5</u></b> |
| <b>6.2    <u>Evaluate Container</u></b> .....                      | <b><u>7</u></b> |
| <b>6.3    <u>Actions for TRU Unknown Container</u></b> .....       | <b><u>7</u></b> |
| <b>6.4    <u>Actions for TRU Containers with Liquids</u></b> ..... | <b><u>7</u></b> |
| <b>6.5    <u>Close Out ACMP</u></b> .....                          | <b><u>8</u></b> |
| <b>7.0    <u>Records</u></b> .....                                 | <b><u>8</u></b> |

**List of Attachments**

|  |                  |
|--|------------------|
| <b>Attachment 1 - Abnormal Container Management Program Criteria</b> .....       | <b><u>9</u></b>  |
| <b>Attachment 2 - Abnormal Container Management Program Form (Example)</b> ..... | <b><u>10</u></b> |

---

Solid Waste  
**Implement ACMP**  
**SW-100-166**

Rev/Change A-1f

Page 2 of 10  
Effective Date:

Approved But Not Released - TRU Retrieval RA - December 3, 2003 (8:49am)

**Revision Status**

| <b><u>Change Level</u></b> | <b><u>Date</u></b> | <b><u>Change Document</u></b> | <b><u>Pages</u></b> | <b><u>Description</u></b>   |
|----------------------------|--------------------|-------------------------------|---------------------|---|
| A-1                        |                    | 31049                         | 5-7                 | Incorporate draft procedure SW-100-176 at round-table meeting of approvers. |
| A-0                        | 10/16/03           | 20690                         | All                 | New Procedure.  |

---

Solid Waste  
**Implement ACMP**  
**SW-100-166**

Rev/Change A-1f

Page 3 of 10  
Effective Date:

Approved But Not Released - TRU Retrieval RA - December 3, 2003 (8:49am)

---

**1.0 Purpose and Scope**

This procedure provides instructions for handling containers with potential for entry into the Abnormal Container Management Program (ACMP) as defined in Attachment 1.

This procedure implements the ACMP portion of WMP-200, Section 4.12, *SWOC Container Management Program* (referred to in this procedure as "Abnormal Container Management Program (ACMP).")

Activities strictly within this procedure are skill-based work, and performing employees are trained and medically qualified according to the hazards encountered in the work (no AJHA necessary). Additional hazards are presented by ACMP mitigation actions (Attachment 2) analysis and any associated controls are described on the ACMP Action Plan.

**2.0 References**

- 2.1 SW-ERP-010, *Response to Bulged TRU Drum*

**3.0 Precautions and Limitations**

- 3.1 Industrial Hygiene (IH) monitoring will be performed in accordance with HNF-16924, *Industrial Hygiene (IH) Monitoring & Sampling Plan* as necessary.
- 3.2 Hand-held radios or other type of communication shall be available for emergency situations during performance of this procedure.
- 3.3 If wind speeds or other inclement weather causes adverse working conditions, activities should be evaluated and Operations and RadCon management approval obtained to continue operations.

**RadCon:**

- 3.4 Job-specific RWP may be required as directed by RadCon management.

**Criticality Limits - Criticality Prevention Specification (CPS):**

- 3.5 Drums  $\geq$  1 Fissile Gram Equivalent (FGE) to be retrieved will be handled as Criticality Prevention Specification (CPS) container type 1A unless otherwise designated in specific handling column on approved list as another type per CPS-SW-003. Other container types may have different array requirements.
- 3.6 Retrieved unknown containers will be treated as CPS Type 4.

---

Solid Waste  
**Implement ACMP**  
**SW-100-166**

Rev/Change A-1f

Page 4 of 10  
Effective Date:

Approved But Not Released - TRU Retrieval RA - December 3, 2003 (8:49am)

Technical Safety Requirements (TSR)

3.7 Transient combustible materials **[TSR 5.6.7.b&c]**

- a. Transient combustible materials shall not exceed that required for current operations. Transient combustible materials shall be defined as wood, paper, cloth, or plastic debris left in the form of shipping containers, wrapping material, dunnage, wooden pallets, supplies, or operational waste.

Exception: Transient combustible materials are not intended to encompass windblown vegetation.

- b. Accumulations of any transient combustible waste material and debris outside in the LLBG shall be separated from waste containers or arrays by a distance of 33 ft. at the end of each work shift.

4.0 **Special Tools, Equipment, and Materials**

4.1 Drum-handling equipment

5.0 **Prerequisites**

- 5.1 Equipment pre-use inspections of hoisting and rigging equipment (including forklifts) shall be performed and the equipment verified to be in proper working order before use.

**[TSR 5.6.11.b]**

- 5.2 Request SDO place LLBG area in "Operation" mode before any waste handling.

- 5.3 Request dispatch to record time LLBG area was placed in "Operation" mode.

Solid Waste  
**Implement ACMP**  
**SW-100-166**

Rev/Change A-1f

Page 5 of 10  
Effective Date:

Approved But Not Released - TRU Retrieval RA - December 3, 2003 (8:49am)

**6.0 Instructions**

**Note:**

- (CPS) after step or in an attachment indicates step relates to criticality prevention.
- [TSR] after step or in an attachment indicates step relates to safety basis information.
- Sections of this procedure may be performed independently as directed by team lead and repeated as necessary.

**6.1 Identify Abnormal Container**

**[TSR]**

**Note:**

- Container is identified as a potential abnormal container using criteria in Abnormal Container Management Program, Attachment 1.
- If combustible waste containers (i.e., wooden or FRP boxes) are discovered during excavation of a TRU retrieval module, they are to be entered into the ACMP under the "Other" category.

6.1.1 IF a potential abnormal container is identified per Attachment 1, **ENSURE** the following have been completed:

- a. **STOP** work.
- b. **WARN** other personnel.
- c. **ISOLATE** container of concern by immediately placing affected operations in immediate area in a safe configuration so container will not be disturbed or affected by other operations in general area/facility.
  1. **ENSURE** container is in a stable position.
  2. **ENSURE** access is controlled for equipment, traffic, or other sources in immediate area around container.
- d. **MINIMIZE** personnel access.
- e. **ESTABLISH** boundaries, as necessary.
- f. **NOTIFY** team lead.



Solid Waste  
**Implement ACMP**  
**SW-100-166**

Rev/Change A-1f

Page 6 of 10  
Effective Date:

Approved But Not Released - TRU Retrieval RA - December 3, 2003 (8:49am)

**Note:**

- Unknown container(s) require preliminary identification and labeling.
- The temporary container identification number format is as follows:

|          |                  |                  |                  |                      |
|----------|------------------|------------------|------------------|----------------------|
| Example: | Date<br>(MMDDYY) | Burial<br>Ground | Trench Number/SA | Sequential<br>Number |
|          | 102103           | W4c              | T20              | 1                    |

6.1.2 **FOR** unknown containers with missing CIN/PIN, **CREATE** temporary container identification number.

6.1.3 **PLACE** Potential ACMP identifier either on container or on physical boundary established around container.

6.1.4 **COMPLETE** Section 1 (Conformance Issue Identification) of Attachment 2.

a. **RECORD** the following:

- CIN
- PIN, if available
- Seal #, if available

b. **RECORD** date of discovery of container with potential to be entered into ACMP on Attachment 2.

c. **CIRCLE** location of discovery.

**Note:**

As much detail as possible should be used in describing the container condition. A continuation sheet may be used for additional details, sketches, and photos, etc.

d. **DESCRIBE** condition of container which may result in placement into the ACMP.

e. **DATE** and **SIGN/PRINT** name.

6.1.5 **SUBMIT** Attachment 2 to team lead for immediate notification of an evaluator.

---

Solid Waste  
**Implement ACMP**  
**SW-100-166**

Rev/Change A-1f

Page 7 of 10  
Effective Date:

Approved But Not Released - TRU Retrieval RA - December 3, 2003 (8:49am)

**6.2 Evaluate Container**

**Note:**

- The evaluation will result in either entry of the container into the ACMP or not.
- Storage limitations, inspection frequency, special labeling and mitigation actions will be established in an Action Plan as necessary for containers entered into the ACMP.

- 6.2.1 (Team Lead) IF container is bulged and can not be moved or overpacked, **IMPLEMENT** emergency response procedure SW-ERP-010.
- 6.2.2 IF container is entered into ACMP, **PERFORM** actions in ACMP Action Plan per identified procedures and/or work packages.
- 6.2.3 IF container is not entered into ACMP, **PERFORM** the following:
- a. **REMOVE** "Potential ACMP Container" sign.
  - b. **DEVELOP** stabilization plan, if needed, with concurrence from appropriate personnel (e.g IS&H, RadCon, Engineering, etc.).
  - c. **COMPLETE** stabilization plan if needed.
  - d. **RETURN** to applicable operating procedure.

**6.3 Actions for TRU Unknown Container**

- 6.3.1 **SEPARATE** from other containers by at least three feet.
- 6.3.2 **HOLD** in inspection area until ACMP evaluation/action plan is complete.

**6.4 Actions for TRU Containers with Liquids**

- 6.4.1 **SEPARATE** from other containers by at least three feet.
- 6.4.2 **PLACE** on spill pallet.
- 6.4.3 **COVER** container and pallet with plastic, as directed by team lead.
- 6.4.4 **PRINT** barcode label and **ATTACH** to container.

Solid Waste  
**Implement ACMP**  
**SW-100-166**

Rev/Change A-1f

Page 8 of 10  
Effective Date:

Approved But Not Released - TRU Retrieval RA - December 3, 2003 (8:49am)

**6.5 Close Out ACMP**

**Note:**

- When mitigation is completed as prescribed in the action plan, the team lead will sign that the mitigation has been completed and Attachment 2 forwarded to the facility manager or designee for approval.
- Following approval of mitigation actions complete, the ACMP is considered to be exited.

6.5.1 UPON approval of mitigation, **PERFORM** the following:

- a. **REMOVE** ACMP labeling, boundary, and special inspections as necessary.
- b. **RETURN** to applicable operating procedure.

**7.0 Records**

| Document  | Destination | Destination    | Disposition             |
|---|-------------|----------------|-------------------------|
| Abnormal Container Management Program Form (Attachment 2)   | Team Lead   | Waste Services | Per Waste Services RIDs |
| <i>Note: Documents provided to SWSD Records (MO720/B117A) must be complete before acceptance.</i> |             |                |                         |

**Solid Waste  
Implement ACMP  
SW-100-166**

Rev/Change A-1f

Page 9 of 10  
Effective Date:

Approved But Not Released - TRU Retrieval RA - December 3, 2003 (8:49am)

**Attachment 1 - Abnormal Container Management Program Criteria**

Container meeting the following criteria shall be entered into the ACMP: [TSR 5.6.12-c,d,e,h]

| Category |  | Criteria   |
|----------|--|--|
| 1        | Indications of bulging from gas generation<br>[TSR 5.6.12-HSRW-d-e]  | A bulged lid interferes with a straight edge laid across the top. The straight edge should span the diameter of the drum. The side wall is bulged, as determined visually.<br><br>Rocking when setting on flat surface indicative of a raised section in center region of bottom surface.  |
| 2        | Physical damage that would preclude handling, movement or disposal without likely spread of contamination.<br>[TSR 5.6.12-HSRW-d-e-f-h]        | Damage has, or appears to have, resulted in penetration through container wall.<br><br>Damage is extensive such that container integrity appears to be affected.<br><br>Damage has, or appears to have, potential to prevent normal safe storage (such as not being stable when stacked, etc.).<br><br>For TRU Retrieval: Physical damage meeting one of the above damage criteria.  |
| 3        | Substantial corrosion that would preclude handling, movement, or disposal without likely spread of contamination.<br>[TSR 5.6.12-HSRW-d-e-f-h] | Corrosion has, or appears to have, resulted in penetration through container wall.<br><br>Corrosion is extensive such that the outer containment appears to be affected.<br><br>Corrosion is, or appears to be, more extensive than that which can be sanded or brushed off.<br><br>Corrosion appears to be originating from inside the container (e.g., blistering, possibly indicating that corrosion damage is more extensive on the inside of the container).<br><br>For TRU Retrieval: Corrosion meeting one of the above corrosion criteria. |
| 4        | High dose rates<br>[TSR 5.6.12-HSRW-d]   | Dose rates that do not meet the facility-specific acceptance criteria of HNF-EP-0063.<br><br>For TRU Retrieval: Radiation levels that exceed >100 mrem/hr at 30 cm or >200 mrem/hr at contact except packages > 55 gallons could have marked point(s) on the bottom or side with surface dose rates up to 1,000 mRem per hour.   |
| 5        | Non-standard containers stored outside<br>[TSR 5.6.12-HSRW-d]  | No programmatic path forward to treatment, disposal, or inside storage.  |
| 6        | Containers with unknown contents<br>[TSR 5.6.12-HSRW-d]  | Information is obtained that causes the characterization to be questioned and a technical evaluation determines that insufficient information is available to assure proper management of the container (e.g., ignitable, corrosive, explosive, or incompatible contents).<br><br>For TRU retrieval:<br>No visible PIN/CIN, or seal number, or illegible identification on drum.<br><br>Containers with CIN/PIN or seal number that do not have any description of contents in SWITS or records.   |
| 7        | Other<br>[TSR 5.6.12-HSRW-g]   | Other identified conformance issue that a technical evaluation determines has safety basis impacts.<br><br>For TRU Retrieval: Unvented TRU drums identified as having a waste stream that could generate oxygen.   |

*Note: Both the category and criteria must be evaluated in making ACMP determinations.*

Solid Waste  
Implement ACMP  
SW-100-166

Rev/Change A-1f

Page 10 of 10  
Effective Date:

Approved But Not Released - TRU Retrieval RA - December 3, 2003 (8:49am)

**Attachment 2 - Abnormal Container Management Program Form (Example)**

|  |  |   |                             |
|--|--|---|-----------------------------|
| <b>1. Conformance Issue Identification</b> | CIN: _____   | PIN: (if available) _____   | Seal # (if available) _____ |
|  | Identification date: _____   | Identification Location: (Circle one)<br>WRAP      T Plant      LLBG      CWC |                             |
|  | Description of Issue<br>Name/Signature: _____ Date: _____<br><i>Provide form to Operations Management as soon as possible upon identification of conformance issue.</i>  |   |                             |
| <b>2. Evaluation</b>                       | Description of Evaluation and Results<br>Entry into ACMP Required: <input type="checkbox"/> Yes - Go to Section 3, ACMP Entry<br><input type="checkbox"/> No - Forward form to WS<br>Evaluator Name/Signature: _____ Date: _____<br><i>Notify Operations Management of the results of the evaluation.</i>  |   |                             |
| <b>3. ACMP Entry</b>                       | <u>Reason for Entry into ACMP</u><br><input type="checkbox"/> 01 A. Bulging<br><input type="checkbox"/> 02 A. Damaged<br><input type="checkbox"/> 02 B. TRU or suspect TRU damaged<br><input type="checkbox"/> 03 A. Corrosion<br><input type="checkbox"/> 03 B. TRU or suspect TRU container corrosion<br><input type="checkbox"/> 04 A. High dose rate exceeds facility EP-0063 criteria<br><input type="checkbox"/> 04 B. High dose rate exceeds TRU retrieval criteria<br><input type="checkbox"/> 05 A. Non-standard container stored outside<br><input type="checkbox"/> 06 A. Unknown contents - questionable characterization for safe management<br><input type="checkbox"/> 06 B. Unknown contents - does not meet the TRU retrieval criteria<br><input type="checkbox"/> 07 A. Other safety basis issue<br><input type="checkbox"/> 07 B. TRU oxygen generating potential<br><br>Evaluator Name/Signature: _____ Date: _____<br><i>Provide copy of form to Waste Services</i> |   |                             |
| <b>4. ACMP Action Plan</b>                 | <u>Storage, Inspection, Labeling and Mitigation Requirements</u><br>Storage Limitations:<br>Inspection Frequency:<br>Special Labeling:<br>Mitigation Actions:<br>Action Plan Approved by Facility Manager or Designee Name/Signature: _____ Date: _____<br><input type="checkbox"/> Skill-based work (no AJHA required)<br><input type="checkbox"/> Use of Procedure(s) _____ and associated AJHA(s) apply<br><input type="checkbox"/> Use of JCS Work Package _____ and associated AJHA(s) apply<br><input type="checkbox"/> Separate RWP Required  |   |                             |
| <b>5. Action Plan Completion</b>           | Mitigation Actions Complete<br>Operations Management Name/Signature: _____ Date: _____<br>Reference Document(s) _____<br><i>Provide form and supporting documentation to Waste Services</i>  |   |                             |
| <b>6. Closeout</b>                         | Records complete, SWTS updated<br>Waste Services Name/Signature: _____ Date: _____   |   |                             |

Attach additional continuation sheets as necessary for any section above. Include CIN, PIN (if available), and Identification Date on each page.